

Amend claims 28, 32, 33, 35 - 38, 40, 42, 45, 47, and
50 - 52 as follows:

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28. (Amended) Device for eliminating unwanted
volatile components from beer wort comprising:

a counter-current contact column for contact between
an ascending current of steam or inert gas and a descending
current of wort at a temperature [near] substantially equal
to the boiling point of said wort at the pressure in the
column[,];

AB

said column containing filler bodies to increase the
surface area of contact within the column between the wort
and the current of steam or inert gas[, characterized in
that the column comprises: in a top part of the column,];

means for feeding and uniformly distributing the beer
wort into said column, [consisting of] said feeding and
uniformly distributing means being located in a top part of
the column and comprising a distribution plate
substantially perpendicular to a longitudinal axis of the
column, said distribution plate being disposed under a wort
feed into said column at the level of the top part of said

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column, said distribution plate including first means for uniform flow of the wort in the descending direction and second means for flow of said current of inert gas or steam in the ascending direction;

said first means for uniform flow of said wort comprising a plurality of orifices [through which the wort passes adapted to distribute regularly and uniformly the current of beer wort over all the transverse surface area of the column, and means through which the steam or the inert gas pass which are separate from the means through which the wort passes] in said distribution plate and the second means for flow of said current of inert gas or steam comprising a plurality of chimneys on a surface of said distribution plate;

said plurality of orifices in said distribution plate being sufficient in number and diameter to allow a predetermined flow rate of said wort, to provide a depth of said wort on top of said plate, and to prevent the passage of steam or inert gas through said orifices and thereby substantially prevent foaming of the wort at the level of the top part of the column;

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[in a bottom part of the column,] means for feeding and uniformly distributing the current of steam or inert gas inside the column [consisting of orifices through which the steam or the inert gas pass adapted to distribute regularly and uniformly the current of steam or inert gas over all the transverse surface area of the column], said means for feeding and uniformly distributing the current of steam or inert gas inside the column being located in a bottom part of the column and comprising a bottom plate arranged substantially perpendicular to the longitudinal axis of the column; and

said bottom plate having means for increasing the surface area of contact, said means for increasing the surface area of contact comprising a number of orifices in said bottom plate such that a total surface area through which said current of inert gas or steam passes upwardly and said current of wort passes downwardly is equal to at least 90% of a transverse surface area of the column so as to substantially prevent foaming of the wort at the level of said bottom plate.

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32. (Amended) Device according to claim [31, characterized in that] 28, wherein the chimneys have a

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height [sufficient to prevent] so that said wort on top of
said distribution plate [flowing] can not flow through said
chimneys when the column is operating.

33. (Amended) Device according to claim 28,
[characterized in that] wherein said filler bodies for
increasing the surface area of contact of the wort with [a]
said current of inert gas or steam comprises a plurality of
rings disposed randomly on [a] said bottom plate and
thereby forming a diffuse array of stacked rings, said
diffuse array being located under said means for uniform
distribution of said wort.

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~~35. (Amended) Device according to claim [34,
characterized in that] 28, wherein the bottom plate has
corrugations over at least part of its surface and wherein
said orifices comprise a plurality of orifices arranged on
its surface.~~

In claim 36, lines 1 - 2, delete "characterized in
that" and insert -- wherein -- in its place.

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~~37. (Amended) Device according to claim 28,
[characterized in that] wherein the means for uniform~~

Sub D4
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distribution of a current of inert gas or steam comprises a main pipe[, ~~optionally communicated with secondary pipes,~~] disposed at a level of a region from which the treated wort is extracted, in the bottom part of the column, and having a plurality of orifices, said orifices being regularly arranged on the greater part of the main pipe [and the secondary pipes] so that the current of inert gas or stream can be fed into the interior of the column over substantially all of the cross-section of said column.

stream

In claim 38, lines 1 - 2, delete "characterized in that" and insert -- wherein -- in its place.

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'40. (Amended) Device according to claim 39, [characterized in that] wherein the means for [recovering] collecting the treated wort comprise at least one, preferably inclined surfaced directed towards the bottom of the column and in the bottom part of said column, said surface having means forming a baffle directed towards the bottom of said column.

In claim 42, lines 1 - 2, delete "characterized in that" and insert -- wherein -- in its place.

In claim 42, line 7, insert -- and -- before "at".

In claim 45, lines 1 - 2, delete "characterized in that" and insert -- wherein -- in its place.

In claim 47, lines 1 - 2, delete "characterized in that" and insert -- wherein -- in its place.

In claim 50, lines 1 - 2, delete "characterized in that" and insert -- wherein -- in its place.

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~~51. (Amended) [Use of a device as claimed in claim 28 to carry out a] A method of eliminating unwanted volatile components from beer wort[, without significant evaporation,] comprising:~~

~~[a first step of] boiling the wort at a temperature in a range of from approximately 90° C to approximately 150° C[, followed by a second step of];~~

~~separating unwanted volatile components from said wort;~~

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said separating step comprising providing a column
having a distribution plate at the level of a top part of
said column and a bottom plate at a bottom level of said
column, which bottom plate provides a free surface area of
at least 90% of the cross sectional area of the column; and

said separating step further comprising introducing
said boiled wort into said column above said distribution
plate; passing said wort through orifices in said
distribution plate in a descending direction and at a flow
rate which allows a volume of wort to build up on a top
surface of said distribution plate, while allowing steam or
inert gas to separately ascend through said distribution
plate so as to reduce the time of contact between the wort
and the inert gas or steam; and while substantially
preventing foaming of said wort at the level of the top
part of the column; creating an ascending current of said
inert gas or steam inside the column beneath said bottom
plate; and placing said descending wort flow in contact
with said ascending current of said inert gas or steam so
as to eliminate said unwanted volatile compounds by flowing
said wort through filler bodies supported by said bottom
plate.

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52. (Amended) [Use] A method according to claim 51,
[characterized in that] further comprising controlling
internal pressure in the column [is controlled] in
accordance with the temperature of the wort entering the
column.

Add the following new claims:

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--53. Device according to claim 37, wherein said
means for uniform distribution of a current of inert gas or
steam further comprises a plurality of secondary pipes in
communication with said main pipe and said secondary pipes
having a plurality of orifices arranged thereon.

54. Device according to claim 28, wherein said filler
bodies are comprised of large size filler bodies.

Sub #1 55. Device according to claim 54, wherein said filler
bodies are rings having a diameter of at least 3 to 4 cm.

Sub C3 56. Device according to claim 28, wherein said filler
bodies are piled up in the volume between said bottom plate
and said distribution plate, said volume being free from
any rack.

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37. A device for eliminating unwanted volatile components from beer wort, said device comprising:

a counter-current contact column;

means for creating a descending column current of wort within said column;

means for creating an ascending column current of inert gas or steam within said column;

said wort descending column current creating means comprising means for feeding and uniformly distributing the beer wort into said column positioned in a top part of said column, said beer wort feeding and uniformly distributing means comprising a distribution plate disposed under a wort feed into the column;

said distribution plate including first means for uniform flow of the wort in the descending direction and second means for flow of said current of inert gas or steam in the ascending direction;

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said means for creating an ascending column of inert gas or steam comprising means for feeding and uniformly distributing the current of inert gas or steam in a bottom part of the column;

said means for feeding and uniformly distributing the current of inert gas comprising a bottom plate having orifices through which the steam or the inert gas pass upwardly;

means for collecting the wort after said wort completes its descent, said collecting means being located beneath said bottom plate and including means for avoiding any significant formation of foam; and

means for extracting the collected wort (for) transmission to at least one of a cooling tank and a fermentation tank.

58. A device according to claim 57, wherein said foam formation avoiding means comprises at least one inclined surface directed towards the bottom of the column and said at least one surface having means forming a baffle in a bottom part of the column over which said wort flows.

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59. A device according to claim 57, wherein:

said distribution plate comprises a metal base with a plurality of orifices therein and a plurality of chimneys arranged on a surface;

said plurality of orifices being in sufficient number and dimensioned to create a particular wort flow rate and to provide a volume of wort on top of said metal base; and

said chimneys having a height which prevents the volume of wort remaining on top of said base from passing through said chimneys.

60. Device according to claim 57, wherein the orifices in said bottom plate are such that a total surface area through which said current of inert gas or steam passes upwardly and said current of wort passes downwardly is equal to at least 90% of a transverse surface area of the column.